

Title (en)  
ELECTROLESS PLATING PROCESS

Title (de)  
STROMLOSES PLATTIEREN

Title (fr)  
PROCÉDÉ DE DÉPÔT AUTOCATALYTIQUE

Publication  
**EP 3647461 A1 20200506 (EN)**

Application  
**EP 18824025 A 20180621**

Priority  
• JP 2017126052 A 20170628  
• JP 2018023630 W 20180621

Abstract (en)  
An object is to provide an electroless plating process which can thin a film thickness of a nickel film and can obtain a film having excellent mounting characteristics, when the nickel film and a gold film are sequentially formed on a surface of a copper material. In order to solve the above-mentioned problems, provided is an electroless plating process which sequentially forms a nickel film and a gold film on a surface of a copper material by an electroless plating method and includes: a step of forming the nickel film on the surface of the copper material by an electroless strike plating method; and a step of forming the gold film by a reduction-type electroless plating method.

IPC 8 full level  
**C23C 18/52** (2006.01); **C23C 18/34** (2006.01); **H01L 21/28** (2006.01); **H01L 21/288** (2006.01); **H01L 21/3205** (2006.01); **H01L 21/768** (2006.01); **H01L 23/522** (2006.01); **H01L 23/532** (2006.01); **H05K 3/18** (2006.01)

CPC (source: EP KR US)  
**C23C 18/1637** (2013.01 - KR); **C23C 18/1651** (2013.01 - EP KR US); **C23C 18/1694** (2013.01 - EP); **C23C 18/1844** (2013.01 - EP); **C23C 18/34** (2013.01 - EP KR US); **C23C 18/44** (2013.01 - EP KR US); **C23C 18/52** (2013.01 - KR); **H01L 21/48** (2013.01 - EP); **H01L 21/7685** (2013.01 - US); **H01L 21/76874** (2013.01 - US); **H01L 24/00** (2013.01 - EP); **H01L 24/16** (2013.01 - EP); **H01L 24/48** (2013.01 - EP); **H05K 3/244** (2013.01 - EP); **H01L 24/45** (2013.01 - EP); **H01L 24/81** (2013.01 - EP); **H01L 24/85** (2013.01 - EP); **H01L 2224/13101** (2013.01 - EP); **H01L 2224/16225** (2013.01 - EP); **H01L 2224/45015** (2013.01 - EP); **H01L 2224/45144** (2013.01 - EP); **H01L 2224/48227** (2013.01 - EP); **H01L 2224/81444** (2013.01 - EP); **H01L 2224/85444** (2013.01 - EP); **H05K 2201/0338** (2013.01 - EP); **H05K 2203/072** (2013.01 - EP); **H05K 2203/073** (2013.01 - EP); **H05K 2203/0789** (2013.01 - EP)

C-Set (source: EP)  
1. **H01L 2224/13101 + H01L 2924/014 + H01L 2924/00014**  
2. **H01L 2224/45144 + H01L 2924/00014**  
3. **H01L 2224/45015 + H01L 2924/20752**

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**US 12018378 B2 20240625; US 2020048773 A1 20200213**; CN 110325665 A 20191011; CN 110325665 B 20210212; EP 3647461 A1 20200506; EP 3647461 A4 20210505; JP 2019007067 A 20190117; JP 6466521 B2 20190206; KR 102084905 B1 20200304; KR 20190102097 A 20190902; SG 11201909369R A 20191128; TW 201905239 A 20190201; TW I668330 B 20190811; WO 2019004056 A1 20190103

DOCDB simple family (application)  
**US 201816485543 A 20180621**; CN 201880012615 A 20180621; EP 18824025 A 20180621; JP 2017126052 A 20170628; JP 2018023630 W 20180621; KR 20197024866 A 20180621; SG 11201909369R A 20180621; TW 107122017 A 20180627